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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-10 (cancelled)

11. (currently amended) A catheter comprising:
an elongated catheter shaft having a lumen; and
a solid-walled variable stiffness mandrel disposed in said shaft lumen,
~~comprised of a variable stiffness,~~ comprised of a non-metal material, said mandrel
~~uniformly tapered from~~ having a proximal section with a first crystallinity[[to]] and a
distal section with a second crystallinity lower than said proximal section first
crystallinity such that the proximal section is stiffer than the distal section[[,]] ~~and said~~
~~mandrel is adapted to reinforce said catheter.~~

12. (currently amended) The catheter of claim 11 wherein said material is
selected from the group consisting of[[:]] polyamides, PEEK, PPS, PEI, PI, and any
combination thereof.

13. (currently amended) The catheter of claim 11 wherein said proximal
section is larger than a diameter of said distal section of said ~~uniformly tapered~~ mandrel.

14. (currently amended) The catheter of claim 11 further comprising an inflatable member comprising a proximal portion, ~~a and~~ a distal portion, and an inflatable interior with a distal end, wherein said distal section of said mandrel extends ~~past said proximal portion~~ to a location along the length of the catheter located in the inflatable interior of said inflatable member.

15. (currently amended) The catheter of claim 14 wherein said distal section of said mandrel extends ~~past said distal portion~~ to a location along the length of the catheter located at the distal end of the inflatable interior of said inflatable member.

16. (previously presented) The catheter of claim 11 wherein said mandrel is formed by annealing to induce a higher crystallinity such that said proximal section is stiffer than said distal section.

17. (previously presented) The catheter of claim 11 wherein said mandrel is formed by necking at high temperatures such that said proximal section is stiffer than said distal section.

18. (previously presented) The catheter of claim 11 wherein said mandrel is formed by taper extruding such that said proximal section is stiffer than said distal section.

19. (currently amended) A catheter comprising:

an outer member;

a hollow inner member extending through said outer member;

an outer lumen between said inner and outer members; and

a non-metal mandrel formed of a polyetheretherketone polymeric material, extending through said outer lumen, ~~said mandrel comprised of a variable stiffness, non-metal material~~, said mandrel having a proximal section having a first crystallinity and a distal section having a second crystallinity lower than the proximal section first crystallinity, and being uniformly tapered from [[a]] the proximal section to [[a]] the distal section, ~~and said mandrel is adapted to reinforce said catheter.~~

20. (cancelled)

21. (previously presented) The catheter of claim 19 wherein a diameter of said proximal section is larger than a diameter of said distal section of said uniformly tapered mandrel.

22. (currently amended) The catheter of claim 19 further comprising an inflatable member having an inflatable interior, and comprising a proximal portion secured to a distal portion of the outer member and a distal portion secured to a distal portion of the inner member, wherein said distal section of said mandrel extends past said proximal portion of said inflatable member to a location along the length of the catheter located in the inflatable interior of the inflatable member.

23. (currently amended) The catheter of claim 22 wherein said distal section of said mandrel extends ~~past said distal portion~~ to a distal end of the inflatable interior of said inflatable member.

24. (previously presented) The catheter of claim 19 wherein said mandrel is formed by annealing to induce a higher crystallinity such that said proximal section is stiffer than said distal section.

25. (previously presented) The catheter of claim 19 wherein said mandrel is formed by necking at high temperatures such that said proximal section is stiffer than said distal section.

26. (previously presented) The catheter of claim 19 wherein said mandrel is formed by taper extruding each such that said proximal section is stiffer than said distal section.

Claims 27-44 (cancelled)

45. (currently amended) An apparatus for reinforcing a catheter for inserting into a body lumen A catheter, comprising:

an elongated shaft having an inflation lumen;

a balloon secured to a distal portion of the shaft with an interior in fluid communication with the inflation lumen; and

a non-metal material mandrel in the elongated shaft, for reinforcing said catheter formed of a polyetheretherketone polymeric material, and comprising a proximal section having a first crystallinity and a distal section having a second crystallinity lower than the first crystallinity of the proximal section, said mandrel uniformly tapered from said proximal section to said distal section, ~~and said mandrel being formed by taper~~

~~extruding~~ such that said proximal section is stiffer than said distal section, and extending to a location along the length of the elongated shaft located in the inflatable interior of the balloon.

Claims 46-50 (cancelled)

51. (currently amended) ~~An apparatus for reinforcing a catheter for inserting into a body lumen~~ A catheter, comprising:

an elongated shaft having an inflation lumen;

a balloon secured to a distal portion of the shaft with an interior in fluid communication with the inflation lumen; and

a non-metal material mandrel in the elongated shaft, ~~for reinforcing said catheter~~ formed of a polyetheretherketone polymeric material, and comprising a proximal section having a first crystallinity and a distal section having a second crystallinity lower than the first crystallinity of the proximal section, said mandrel uniformly tapered from said proximal section to said distal section, ~~and said mandrel being formed by taper~~ ~~extruding~~ such that said proximal section is stiffer than said distal section, and extending to a location along the length of the elongated shaft located in the inflatable interior of the balloon.

52. (cancelled)

53. (currently amended) The ~~apparatus~~ catheter of claim 52 wherein said distal section of said mandrel extends ~~past said distal portion~~ to a distal end of the inflatable interior of said inflatable member.

Claims 54-55 (cancelled)

56. (previously presented) The apparatus of claim 51 wherein a diameter of said proximal section is larger than a diameter of said distal section of said uniformly tapered mandrel.

57. (currently amended) The catheter of claim 11 wherein said mandrel is fixed to a catheter shaft to lock said mandrel in place relative to said catheter shaft.

58. (previously presented) The catheter of claim 11 further comprising an inner tubular member disposed near said mandrel, wherein said inner tubular member is adapted to receive a guidewire.

59. (currently amended) The catheter of claim 19, wherein said mandrel is fixed ~~to a catheter shaft~~ to lock said mandrel in place relative to said catheter outer member.

60. (previously presented) The catheter of claim 19 wherein said hollow inner member is adapted to receive a guidewire.

Claims 61-63 (cancelled)

64. (previously presented) The apparatus of claim 51 wherein said mandrel is fixed to said catheter to lock said mandrel in place relative to said catheter.

65. (previously presented) The apparatus of claim 51 further comprising an inner tubular member disposed within said catheter and adapted to receive a guidewire.